PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

International application No. PCT/JP2004/015727 22.10.2004 International Present Classification (IPC) or national classification and IPC F02M61/16 (2006.01), F02M61/14 (2006.01), F02F1/24 (2006.01), F02F11/00 (2006.01) Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 5 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. (sent to the applicant and to the International Bureau) a total of 7 sheets, as follows: sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) . containing a sequence Listing (see Section 802 of the Administrative Instructions). 4. This report contains indications relating to the following items: Box No. I Basis of the report Box No. II Priority Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. IV Lack of unity of invention
International Patent Classification (IPC) or national classification and IPC F02M61/16 (2006.01) , F02M61/14 (2006.01) , F02F1/24 (2006.01) , F02F11/00 (2006.01) Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 5 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a (sent to the applicant and to the International Bureau) a total of 7 sheets, as follows: sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). 4. This report contains indications relating to the following items: Box No. I Basis of the report Box No. II Priority Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
Box No. 1V Lack of unity of invention
Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement
Box No. VI Certain documents cited
Box No. VII Certain defects in the international application
Box No. VIII Certain observations on the international application
Date of submission of the demand Date of completion of this report
Name and mailing address of the IPEA/JP Authorized officer

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/JP2004/015727

Box	No. I	Basis of the report			
1.		h regard to the language, this report is based on the interrecated under this item.	national application in the language in	which it	was filed, unless otherwise
		This report is based on translations from the original lar	-		,
		which is the language of a translation furnished for the international search (Rule 12.3 and 23.1(b))	purposes or:		
		publication of the international application (Rule	12.4)		
		international preliminary examination (Rule 55.2			
2.		h regard to the elements of the international application,	this report is based on (replacement s		
		iving Office in response to an invitation under Article 1 report):	4 are referred to in this report as "o	riginally	filed" and are not annexed to
		the international application as originally filed/furnished	d		
	\boxtimes	the description:			
		pages 1-4			as originally filed/furnished
		pages*	received by this Authority on	31.05	.2005
		pages*	received by this Authority on		
	\boxtimes	the claims:			
		nos.			as originally filed/furnished
		nos.*	as amended (togethe	r with an	y statement) under Article 19
		nos.* 2,3,5	received by this Authority on	31.05	.2005
		nos.*	received by this Authority on		
	\boxtimes	the drawings:			
					as originally filed/furnished
		sheets*			
			received by this Authority on		
	П	a sequence listing and/or any related table(s) – see Supp			
3.	\square		eraning to sequence		
э.		The amendments have resulted in the cancellation of: the description, pages 11			
		<u> </u>			
		the drawings checkelfing 1			
		any table(s) related to sequence listing (specify):			
4.		This report has been established as if (some of) the an			
••	Ш	they have been considered to go beyond the disclosure	1		
		the description, pages			
		the claims, nos.			
		the drawings, sheets/figs			
		the sequence listing (specify):			
		any table(s) related to sequence listing (specify):			
*	If ite	em 4 applies, some or all of those sheets may be marked '	'superseded."		

International application No.	•
PCT/JP2004/015727	

1.	Statement	
Fig.	Novelty (N) Claims 2, 3, 5	YES
	Claims	
	Inventive step (IS) Claims	YES
	Claims 2, 3, 5	
	Industrial applicability (IA) Claims 2, 3, 5	
	Claims	
2.	Citations and explanations (Rule 70.7)	
	Document 1: JP 4-86371 A (Yamaha Motor Co., Ltd.), 18	
	March 1992, entire text; all drawings	
	Document 2: JP 11-294302 A (Yamaha Motor Co., Ltd.), 26	
	October 1999, paragraph [0030]; fig. 5 and 8	
	& EP 0945611 A2, paragraph [0060], fig. 5,	
	8, 15, 22, 26 and 30	
	Document 3: JP 2002-202030 A (NOK Corporation), 19 July	
	2002, paragraphs [0026] and [0027]; fig. 1 $\&$	
	US 2003/0178784 A1, paragraphs [0045] and	
	[0046]; fig. 1 & EP 1326022 A1 & WO	
	2002/031354 A1 & AU 9424701 A	
	Document 4: JP 2002-364494 A (Toyota Motor Corporation,	
	NOK Corporation, Denso Corporation), 18	
	December 2002, paragraph [0028]; fig. 1	
	Document 5: JP 2002-81548 A (Honda Motor Co., Ltd.), 22	
	March 2002, paragraph [0013]; fig. 1	
	Document 6: JP 2002-257239 A (Toyota Motor Corporation,	
	NOK Corporation, NOK Vibracoustic	
	Corporation), 11 September 2002, entire	
	text; all drawings	
	,	
	The invention set forth in claim 2 does not involve	
	an inventive step in the light of documents 1 and 2 cited	İ

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

in the international search report and newly cited documents 3 to 5. It would be easy for a person skilled in the art to apply the known feature set forth in documents 3 to 5, wherein the seal rings of combustion gas seals for fuel injection valves comprise heat-resistant members made from resin, to a combustion gas seal for fuel injection valves having all of a plurality of annular grooves provided on the outer peripheral surface of a fuel injection valve provided with seal rings having approximately the same outer diameter dimensions, as set forth in documents 1 and 2.

The invention set forth in claims 3 and 5 does not involve an inventive step in the light of documents 1 to 5 and document 6 cited in the international search report. It would not be particularly difficult for a person skilled in the art to add the feature set forth in document 6, wherein a seal washer having a metal ring and a rubber flexible member fixed to said metal ring by baking is held in place by the housing and fuel injection valve, to the combustion gas seal for fuel injection valves set forth in documents 1 to 5.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/015727

Box 1	No. VI	Certain documents cit	ted				
1.	Certain pub	lished documents (Rule 70	0.10)				
		Application No. Patent No.		Publication date (day/month/year)	Filing (Priority date (valid claim) (day/month/year)
	JP	2004-239124		26.08.2004	05.02.		
	[E,	x]					
2.	Non-writter	n disclosures (Rule 70.9)					
2.		n disclosures (Rule 70.9) Kind of non-written disclo	osure	Date of non-writter (day/month/y	n disclosure vear)	referring	of written disclosure to non-written disclosure hay/month/year)
2.			osure	Date of non-writter (day/ <i>month/</i> y	n disclosure wear)	referring	
2.			osure	Date of non-writter (day/ <i>month/</i> y	n disclosure vear)	referring	o non-written disclosure
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2.			osure	Date of non-writter (day/month/y	n disclosure year)	referring	o non-written disclosure